

NewNets 2022

4th IEEE Workshop on Emerging Technologies and Trends in Engineering Low-Power Networks

<http://newnets2022.github.io>

May 3-6, 2022. Milan, Italy

In conjunction with CPS-IoTWeek

A founding pillar of the IoT concept is the availability of low-cost low-power devices with wireless technologies providing sensing, communication, and actuation. In the past decade, the research community have produced proven solutions to build low-power mesh networks. Traditionally, the focus has been on short-range radio communication (e.g., ZigBee, Bluetooth, and ZWave.). An appealing alternative that have gained momentum in the IoT landscape, is to equip the nodes with long-range low power radio modules. As a result, long-range radio communication technologies (e.g., SigFox, LoRa, NB-IoT, and 802.15.4g) are considered as candidate technologies for many low-power wide area network (LPWAN) applications, especially those that require extended coverage such as citywide sensing, environmental monitoring, or remote infrastructure monitoring.

The aim of this workshop is to bring together researchers and practitioners working in the field of IoT from both academia and industry, to discuss and explore short- and long-range solutions, the tradeoffs between these two paradigms, as well as how they can be used in synergy. In order to push the state of the art, several points need to be addressed: new features for the long-range technologies (i.e., over-the-air updates, roaming), radio resource management, regulations and policies on spectrum usage and sharing, business case analysis that are more well suited for certain vertical markets.

The topics of interest include, but are not limited to:

- protocol design
- hardware platform design
- modeling and analysis of low-power short or/and long-range communication
- reliability, adaptability, and dependability of short and long-range communication solutions
- new features for the long-range technologies (i.e., over-the-air updates, roaming)
- wake-up radios for short- or/and long-range technologies
- radio resource management
- satellite IoT solutions
- applications domains (e.g., smart cities, smart health, smart buildings, smart transportation)
- anomaly detection
- security solutions
- deployment experiences, case studies, and lessons learned
- evaluation and testbeds
- regulations and policies on spectrum usage and sharing
- business case analysis that are more well suited for certain vertical markets.

Submission Instructions

Submitted papers must contain between 4 and 6 single spaced U.S. letter pages, including all figures, tables, and references. All submissions must be written in English.

Important Dates

Submission deadline: February 11, 2022

Author notification: March 18, 2022

Camera ready deadline: March 30, 2022

Workshop Co-chairs

Anca Hangan, Technical University of Cluj-Napoca, Romania

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Ramona Marfievici, Digital Catapult, UK

Technical Program Committee – TBA